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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/677,055 | 09/30/2003 | Adrian P. Stephens | 42390.P17446 | 8084 |
| 59796 | 7590 | 06/08/2007 | EXAMINER | |
| INTEL CORPORATION c/o INTELLEVATE, LLC P.O. BOX 52050 MINNEAPOLIS, MN 55402 | | | NGUYEN, HANH N | |
| | | ART UNIT | PAPER NUMBER | |
| | | 2616 | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|-------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/677,055 | STEPHENS ET AL. |
| | Examiner Hanh Nguyen | Art Unit 2616 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on Application filed on 9/30/03.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-60 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-60 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 30 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>7/18/05</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because the abstract filed in 9/30/03 is more than two paragraphs long. Applicant is required to delete the second paragraph beginning at " Express mail....VA 22313-1450" . Correction is required. See MPEP § 608.01(b).

Claim Objections

Claim 15 is objected to because of the following informalities: the language "will" on line 7 raises an indefinite meaning and therefore is required to be deleted. Similar problem regarding to the claimed language " will" also occurs in claims 2, 3, 4, 5, 13, 16, 20, 21, 22, 31, 32, 33, 34, 41, 42, 49, 50, 51, 56 and 57. Appropriate correction is required. Claims 4 and 5 depend on claim 1 are duplicate claims since they include similar limitations.

Regarding claims 37, 46, the claimed language " antennae" is misspelled and should be corrected.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 30, it is unclear in the claimed language because does a medium access control device provide multiple data units to a receiver or to a physical device ?
Claims 31-38 are also rejected because they depend on claim 30 respectively.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-12, 18-29, 48-53 and 54-60 are rejected under 35 USC 102(e) as being anticipated by Proctor, Jr. (US pat. 6,925,070 B2).

Regarding claims 1, 12, 18, 48 and 54, Proctor, Jr. discloses a method comprising transmitting a header over an air interface, at a first modulation rate; and transmitting, in a same frame as the header, a consolidated payload over the air interface, at a second modulation rate different than the first modulation rate (see fig.1 & fig.3, col.9, lines 45-55; transmitting a preamble or header 320 and payload 330

via wireless interface; the preamble 320 and the payload 330 are modulated at different rates and in a same frame); wherein the consolidated payload includes multiple data units (seee fig.3, col.11, lines 65-67; payload 330 includes sub-packets of data).

Proctor, Jr. further discloses the preamble enables a receiver to synchronize (see fig.6, steps 610, 615; col.13, lines 40-55; preamble 320 is read by a receiver 14 to synchronize with base station processor 20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-17 are rejected under 35 USC 103(a) as being unpatentable over Proctor Jr. in view of Frank et al. (US pat. 7,164,663 B2).

Regarding claim 15, Proctor Jr. discloses most of limitations in claims 1, 12. Proctor Jr. discloses that data packet 305 (fig.3) is transmitted in sub-packets (see claim 1, fig.5, step 525, col.12, lines 47-50, but does not disclose the header includes information about an end of each of multiple data units within the payload. Frank et al. discloses in fig.1C header 134 includes PSDU length word 134a (see col.7, lines 50-60; header includes information about an end of each data unit). Therefore, it would have been obvious to one skilled in the art combine the teaching of Frank et al. with that of Proctor, Jr. to indicate in the header the length of each data unit in the payload. The

motivation is to allow only desired receiver to decode the portion of data packet and non target receivers need not to decode the payload portion.

Claims 30-47 are rejected under 35 USC 103(a) as being unpatentable over Proctor Jr. in view of Ryan (US pat. 7,065,036 B1).

Regarding claims 30 and 39, Proctor et al. has disclosed most of limitations in claims 1, 12 and 15. Proctor et al. does not disclose a physical device coupled to a MAC device to transmit header and payload at different modulation rates. Ryan discloses in fig.1, physical device 106 is coupled to MAC device 112 to transmit modulated data via radio link 132 (see col.3, lines 50-55 and col.4, lines 5-15). Therefore, it would have been obvious to one skilled in the art to implement a MAC device and a physical device of Ryan into Proctor Jr. to transmit multiple data units.

In claims 3-5, 20-22, 32-34, 41, 50, 51, 56 and 57, Proctor et al. does not disclose the header includes information that enables a receiver to determine when an end of the consolidated payload will occur and when an end of each of the multiple data units will occur. Frank et al. discloses in fig.1C header 134 includes PSDU length word 134a (see col.7, lines 50-60; header includes information about an end of each data unit) and in fig.1e length 154a indicating length of frame (see fig.1e, col.8, lines 14-16; information indicating when an end of payload will occur). Therefore, it would have been obvious to one skilled in the art combine the teaching of Frank et al. with that of Proctor, Jr. to indicate in the header the length of each data unit as well as the length of payload. The motivation is to allow only desired receiver to decode the portion of data packet and non target receivers need not to decode the payload portion.

In claims 2, 13, 16, 19, 31, 40, 49, 55, Proctor et al. discloses the header includes an indication of the second modulation rate that will be used to transmit the consolidated payload (see fig.3,col.9, lines 45-55; modulation type of payload 324), and wherein the header and the multiple data units form a portion of a single, self-describing, protocol data unit (see fig.3, preamble 320 includes address 322, modulation type of payload 324, FEC rate 326).

In claims 6, 14, 23, 35, 43, 52 and 58, Proctor et al. does not disclose multiple delimiters which include a delimiter for at least one of the multiple data units, wherein the delimiter for a data unit includes an indication of a length of the data unit, and wherein the delimiter is transmitted before the data unit at the second modulation rate. Frank et al. discloses synchronization delimiter 122b (fig.1B) that is used to delimit the end of synchronization information (see col.7, lines 35-45). Therefore, it would have been obvious to one skilled in the art combine the delimiter teaching of Frank et al. with that of Proctor, Jr. to indicate the length of data unit.

In claims 7, 24, 44 and 59, Proctor et al. discloses the delimiter further includes a validation field, which enables a receiver to determine whether the indication of the length is received correctly (see fig.2, col.11, lines 5-10; FEC decoder 270 verifies signal is properly received).

In claims 9, 17, 27, 36, 45, 53 and 60, the combination of Proctor et al. and Frank et al. discloses header is a physical device header, and wherein at least one of the multiple data units include a service data unit that is separately deliverable by a receiver (see claims 3-5).

In claims 10, 11, 28 and 29, Proctor et al. discloses the modulation rates in the preamble and payload are different; but does not disclose the first modulation rate is in a range of approximately 6 to 12 megabits per second and the second modulation rate is in a range of approximately 6 to 240 megabits per second. Frank et al. discloses, in fig.1e, PSF 154b indicates modulation schemes including 6Mbps, 12 Mbps and upto 54 Mbps (see col.8, lines 15-25; the first modulation rate is in range from 6Mbps to 12 Mbps). Therefore, it would have been obvious to one skilled in the art to implement the teaching of Frank et al. into the Proctor in order to transmit the preamble at modulation rate range from 6Mbps to 12Mbps and payload at modulation rate range from 6-240 Mbps.

In claims 8, 25 and 26, Protor discloses payload occurs within one symbol (Protor discloses a CDMA wireless communication, therefore the payload is transmitted in symbol width). See Proctor.

In claims 37, 38, 46 and 47, Protor discloses one or more antennae, coupled to the physical device, which is operable to provide an interface between the air interface and the physical device (see fig.1, antennas 16-1, 16-2 coupled to access units 14-1, 14-2 function as an air interface).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shahar et al. (US pat. 6,987,754 B2);

Olds et al. (US pat. 5,596,315).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Thursday from 8:30 to 4:30. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild, can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen



HANH NGUYEN
PRIMARY EXAMINER